**BILLING CODE: 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**RIN 0648-XF090**

# Endangered and Threatened Species; Take of Anadromous Fish

**AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.**

**ACTION**: Applications for four new scientific research permits, two permit modifications, and four permit renewals.

**SUMMARY**: Notice is hereby given that NMFS has received ten scientific research permit application requests relating to Pacific salmon, steelhead, eulachon, and green sturgeon. The proposed research is intended to increase knowledge of species listed under the Endangered Species Act (ESA) and to help guide management and conservation efforts. The applications may be viewed online at: *https://apps.nmfs.noaa.gov/preview/preview_open_for_comment.cfm*.

**DATES**: Comments or requests for a public hearing on the applications must be received at the appropriate address or fax number (see **ADDRESSES**) no later than 5 p.m. Pacific standard time on [*insert date 30 days after date of publication in the FEDERAL REGISTER*].

**ADDRESSES**: Written comments on the applications should be sent to the Protected Resources Division, NMFS, 1201 N.E. Lloyd Blvd., Suite 1100, Portland, OR 97232-1274. Comments may also be sent by e-mail to *nmfs.swr.apps@noaa.gov* (include the permit number in the subject line of email).

**FOR FURTHER INFORMATION CONTACT**: Shivonne Nesbit, Portland, OR (ph.: 503-231-6741), e-mail: *Shivonne.Nesbit@noaa.gov*). Permit application instructions are available from the address above, or online at *https://apps.nmfs.noaa.gov*.

**SUPPLEMENTARY INFORMATION**:

**Species Covered in This Notice**

The following listed species are covered in this notice:

Chinook salmon (*Oncorhynchus tshawytscha*): threatened California Coastal (CC); endangered Sacramento River winter-run (SRWR); threatened Central Valley spring-run (CVSR).

Coho salmon (*O. kisutch*): threatened Southern Oregon/Northern California Coast (SONCC); endangered Central California Coast (CCC).

Steelhead (*O. mykiss*): threatened Northern California (NC); threatened Central California Coast (CCC); threatened California Central Valley (CCV); threatened South-Central California Coast (S-CCC); endangered Southern California (SC).

North American green sturgeon (*Acipenser medirostris*): threatened southern distinct population segment (sDPS).

Eulachon (*Thaleichthys pacificus*): threatened sDPS.

**Authority**

Scientific research permits are issued in accordance with section 10(a)(1)(A) of the ESA (16 U.S.C. 1531 *et. seq*) and regulations governing listed fish and wildlife permits (50 CFR parts 222-226). NMFS issues permits based on findings that such permits: (1) are applied for in good faith; (2) if granted and exercised, would not operate to the disadvantage of the listed species that are the subject of the permit; and (3) are

consistent with the purposes and policy of section 2 of the ESA. The authority to take listed species is subject to conditions set forth in the permits.

Anyone requesting a hearing on an application listed in this notice should set out the specific reasons why a hearing on that application would be appropriate (see ADDRESSES). Such hearings are held at the discretion of the Assistant Administrator for Fisheries, NMFS.

**Applications Received**

*Permit 19820*

Dr. James Hobbs, Professor at the University of California in Davis, CA is seeking a five-year research permit to annually take juvenile SRWR and CVSR Chinook, CCC and CCV steelhead, and sDPS green sturgeon in the San Francisco Bay Area and tributaries. The purpose of this research is to determine the degree to which Longfin Smelt use tributaries of San Pablo and San Francisco bays as spawning and rearing habitat. This information would improve the understanding of how bay tributaries contribute to the overall population of Longfin Smelt. Although this study principally targets longfin smelt, SRWR and CVSR Chinook, CCC and CCV steelhead and sDPS green sturgeon may be encountered during sampling. Fish would be captured with beach seines, fyke nets, and trawls (otter and Kodiak). Captured fish would be identified by species, enumerated, and released. A sub-sample of 30 individuals per species would be measured. The researchers do not propose to kill any fish but a small number may die as an unintended result of research activities. This research will enhance the knowledge of the distribution of the species in bay tributaries that have not been previously monitored.

*Permit 17292*

NMFS' Southwest Fisheries Science Center (SWFSC) is seeking a five-year research permit to annually take adult and juvenile CC Chinook, CCC and SONCC coho, NC, S-CCC, SC and CCC steelhead. Sampling would be conducted in California on a variety of coastal salmonid populations. The purposes of this study are to: (1) estimate population abundance and dynamics; (2) evaluate factors affecting growth, survival, reproduction and life-history patterns; (3) assess life-stage specific habitat use and movement; (4) evaluate physiological performance and tolerance; (5) determine the genetic structure of populations; (6) evaluate the effects of water management and habitat restoration; and (7) develop improved sampling and monitoring methods. The SWFSC proposes to capture fish using backpack electrofishing, hook and line angling, hand and/or dipnets, beach seines, fyke nets, panel, pipe or screw traps, and weirs. The SWFSC also proposes to observe adult and juvenile salmonids during spawning ground surveys and snorkel surveys. Some fish would anesthetized, measured, weighed, tagged (coded wire, elastomer, radio, acoustic, passive integrated transponder (PIT) or sonic), and tissue sampled for genetics identification. Intentional lethal take is proposed to support laboratory experiments using hatchery-origin fish whenever possible to examine fish physiology, environmental tolerance, and as part of field-based research to assess performance, maternal origin (resident v. anadromous) and/or life-history and habitat use (freshwater, estuarine and marine). The research would benefit the affected species by providing critical information in support of the conservation, management, and recovery of Coastal California salmon stocks.

*Permit 20524*

The United States Geological Survey (USGS) is seeking a one-year permit to take juvenile CC, SRWR and CVSR Chinook, CCC coho, CCC, CCV, S-CCC, SC steelhead, and sDPS green sturgeon. The goal of the California Stream Quality Assessment (CSQA) is to assess the quality of streams in California by characterizing multiple water-quality factors that are stressors to aquatic life and evaluating the relation between these stressors and biological communities. Approximately ninety sites would be sampled for up to nine weeks for contaminants, nutrients, and sediment in water. Stream-bed sediment would be collected during the ecological survey for analysis of sediment chemistry and toxicity. Fish would be collected via backpack electrofishing. Captured fish would be held in aerated live wells and buckets and would be identified, enumerated and released. A subset of non-listed fish from each site will be sacrificed for mercury analysis. The researchers do not propose to kill any listed fish but a small number may die as an unintended result of research activities. This research will benefit listed species by providing information about the most critical factors affecting stream quality and thus generate insights about possible approaches to protecting the health of streams in the region.

*Permit 20035*

Stillwater Sciences is seeking a one-year permit to take juvenile SONCC coho in the Salmon and Scott River floodplains (California). Fish would be captured by beach seine or minnow traps. The study is part of a larger comprehensive planning effort that would lead to strategic restoration of floodplains and mine tailings in the Salmon and Scott rivers. The purpose of this research is to assess mercury contamination in fish and invertebrates. Non-listed fish would be collected and sacrificed for tissue testing of

mercury contamination. The sampling has the potential to capture juvenile SONCC coho salmon. As part of this project, information would be collected on coho (e.g., locations where individuals were observed and/or captured, habitat conditions) because this information will help determine the presence and distribution of coho—especially in the Salmon River where there is a paucity of such data. The researchers do not propose to kill any listed fish but a small number may die as an unintended result of research activities. The project would benefit listed species by providing data on mercury contamination, data that will be used to direct restoration efforts.

*Permit 17428-2M*

The U.S. Fish and Wildlife Service (FWS) is seeking to modify a five-year permit that allows them to annually take juvenile CCV steelhead, juvenile SRWR and CVSR Chinook salmon, and juvenile sDPS green sturgeon at rotary screw traps in the American River in Sacramento County, California. The purposes of this study are to: (1) assess population-level abundance, production, condition, survival, and outmigration timing of juvenile salmonids; (2) evaluate the effectiveness of restoration actions; and (3) generate data that can be incorporated into life cycle models. Captured fish would be anesthetized, measured, weighed, tagged (acoustic or PIT), have a tissue sample taken, allowed to recover, and released. The modification is requested because the original permit application underestimated the number of CCV steelhead and SRWR and CVSR Chinook salmon that would be caught in the American River. The FWS is requesting a higher take limit and seeking to add green sturgeon because multiple years of trapping data suggest the authorized take limit needs to be adjusted. The researchers would avoid adult salmonids, but some may be encountered as an unintentional result of sampling. The

researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities. The project would benefit listed species by providing data that will be used to infer biological responses to ongoing habitat restoration activities, and direct future management activities to enhance the abundance, production, and survival of juvenile salmon and steelhead in the American River.

*Permit 17299-3M*

The SWFSC is seeking to modify a five-year permit that currently allows them to annually take juvenile CCV steelhead, juvenile SRWR and CVSR Chinook salmon. The sampling would take place in the Sacramento River and its tributaries. The purpose of this study is to document the survival, movement, habitat use and physiological capacity of Chinook salmon and steelhead and their predators in the Sacramento River basin. The SWFSC proposes to capture fish using hand and/or dipnets, beach seines, hook and line angling, and both backpack and boat-operated electrofishing. Captured fish would be anesthetized, tagged (sonic, acoustic, or PIT) and released. A subsample would have tissue samples taken. The SWFSC proposes to intentionally kill 50 CVSR juvenile chinook. From these, the researchers would collect otoliths for age/growth analysis, organ tissue for isotope, biochemical, and genomic expression assays and parasite infections. They would also collect stomach contents for diet analysis and tag effects/retention studies. Any CVSR fish that are unintentionally killed would be used in place of the intentional mortalities.

The permit would be modified to include (1) boat electroshocking, (2) PIT-tagging at screw trap locations in lieu of and/or in addition to acoustic tagging, (3) tissue and otolith sampling, and (4) the intentional directed mortality discussed above. The

research would benefit the affected species by providing information to support the conservation, restoration, and management of Central Valley salmon stocks.

*Permit 16531-2R*

FISHBIO Environmental is seeking to renew a five-year research permit to take juvenile and adult CCV steelhead and CVSR Chinook in the Merced River (California). The purpose of this study is to obtain data on the habitat needs of fall-run Chinook and to assess the status of steelhead/rainbow trout in the Merced River. Fish would be captured at rotary screw traps and passively observed at a resistance board weir equipped with an infrared camera and during snorkel surveys. Fish captured at the screw traps would be anesthetized, identified by species, measured, weighed and released. A sub-sample of juvenile fall-run Chinook would be marked with a photonic dye to determine trap efficiency. Scale samples would be collected from up to 50 juvenile fall-run Chinook each week and from a small number of juvenile and adult O. mykiss during the season. Although fall-run Chinook are the researchers' primary target, they would also collect data rainbow trout/steelhead. This research would benefit listed salmon by identifying factors that limit fish production in the Merced River.

*Permit 15542-2R*

Normandeau Associates is seeking to renew a five-year research permit to take juvenile and adult CCV steelhead in Lower Putah Creek in the lower Sacramento Basin (California). The purpose of this study is to monitor the distribution and relative abundance of fish populations in lower Putah Creek downstream of the Putah Diversion Dam. Fish would be captured by backpack and boat electrofishing. Captured fish would be identified by species, measured, weighed, allowed to recover, and released. The

researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities. This research would benefit listed steelhead by providing information on fish response to river flows and on the distribution and diversity of rainbow trout/steelhead in Putah Creek.

*Permit 16318-2R*

Hagar Environmental Services is seeking to renew a five-year research permit to take juvenile CCC coho, CCC and S-CCC steelhead in the San Lorenzo-Soquel and Salinas subbasins. The purpose of this study is to assess salmonid habitat, presence, and abundance in order to inform watershed management and establish baseline population abundances before habitat conservation measures are implemented. The researchers would use backpack electrofishing and beach seines to capture the fish and would observe them during snorkel surveys. Captured fish would be enumerated, measured, and examined. Scale samples would be taken from a limited subset of individuals. Some salmonids would be PIT-tagged for a mark-recapture abundance estimation and to assess movement patterns. Snorkel surveys would be used in place of capture whenever possible. The researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities. This research would benefit listed species by providing population, distribution and habitat data that will be used to draft a Habitat Conservation Plan for the City of Santa Cruz.

*Permit 10093-2R*

The California Department of Fish and Wildlife (CDFW) is seeking to renew a five-year permit to take adult and juvenile CC Chinook, CCC and SONCC coho, and NC, S-CCC, SC and CCC steelhead. The project goal is to restore salmon and steelhead

productivity in coastal California streams through a comprehensive restoration program. The specific goals of this research project are to assess fish abundance and distribution in coastal streams. Fish would be captured by backpack electrofishing, beach seine, minnow traps, and weirs, and they would be observed during snorkel and spawning ground surveys. Some fish would be anesthetized, measured, weighed, tagged, and tissue sampled for genetic information. The researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities. This research would benefit listed species by providing data to assess restoration projects and direct future habitat restoration needs.

This notice is provided pursuant to section 10(c) of the ESA. NMFS will evaluate the applications, associated documents, and comments submitted to determine whether the applications meet the requirements of section 10(a) of the ESA and Federal regulations.

The final permit decisions will not be made until after the end of the 30-day comment period. NMFS will publish notice of its final action in the **FEDERAL REGISTER**.

Dated: December 19, 2016.

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Angela Somma,

Chief, Endangered Species Division,

Office of Protected Resources,

National Marine Fisheries Service

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